

Enhancing Nationally Determined Contributions (NDCs) by Developing Energy Roadmaps

Track 1: Enhancing NDC and Energy Roadmap



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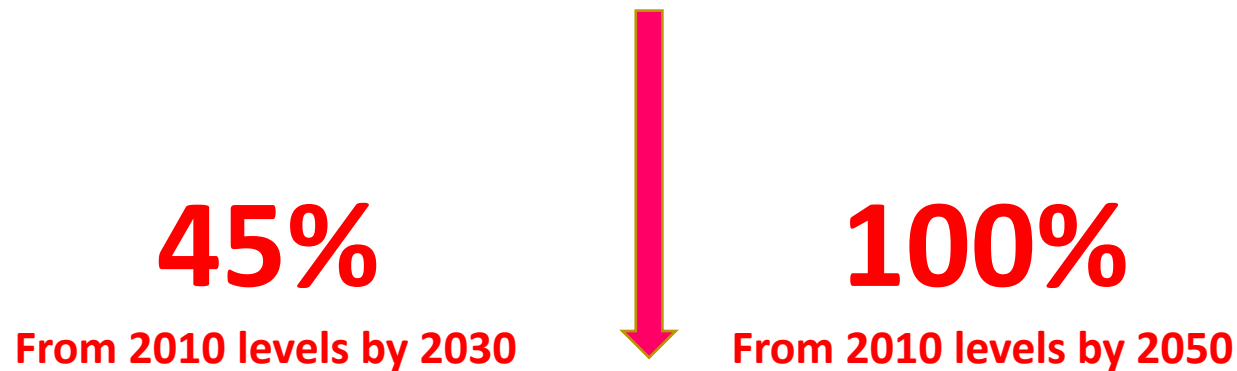
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Studies suggest first round of NDCs, if fully implemented, would lead to warming of 2.9°C to 3.4°C over the course of the century (UNEP, 2018).

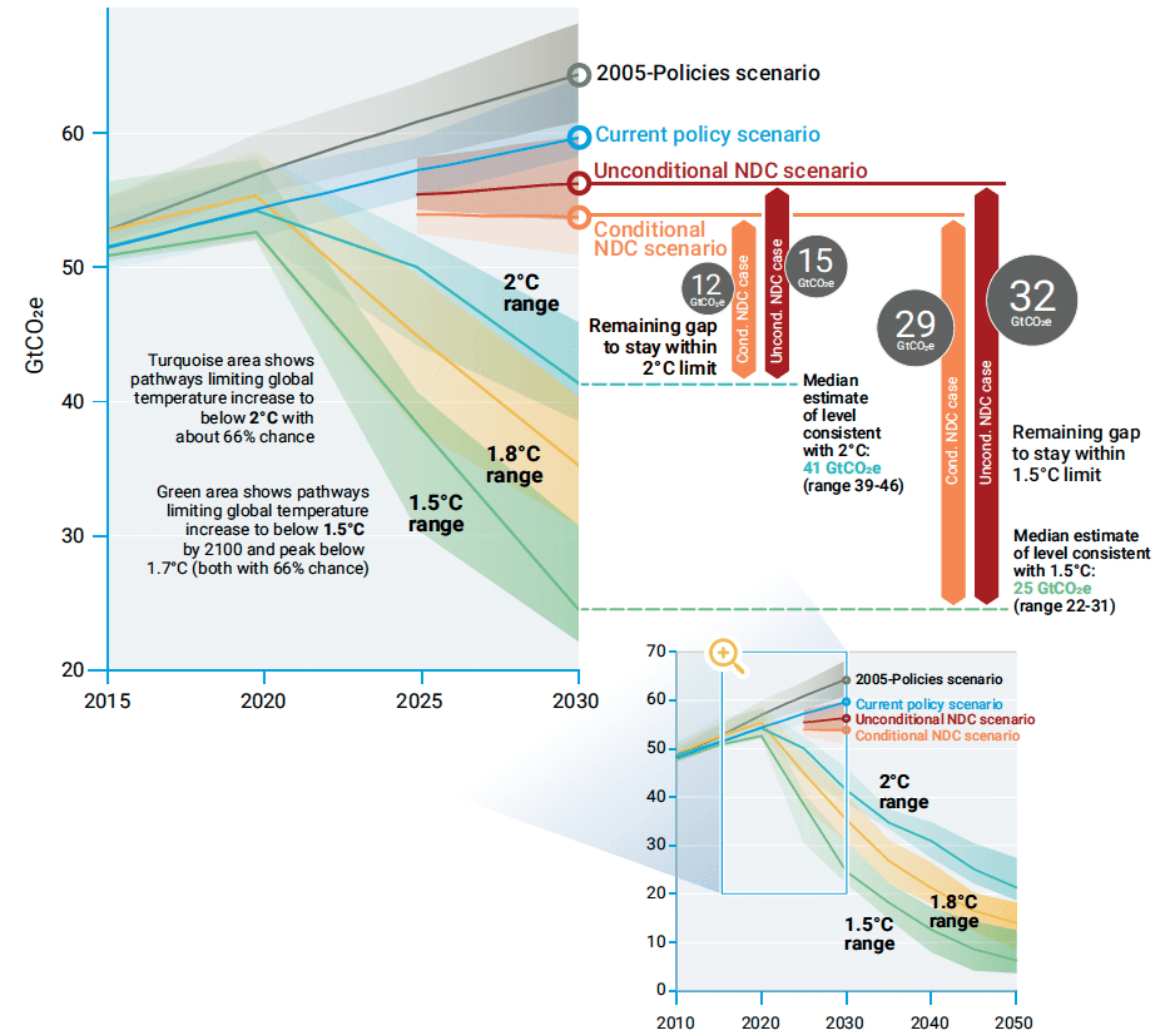
According to the Intergovernmental Panel on Climate Change (IPCC), global net anthropogenic CO₂ emissions need to decline by



to limit the global warming to 1.5°C

Global progress of climate action

- **The 1.5°C goal is on the brink of becoming impossible**
 - Based on today's commitments, emissions in 2030 would be 56 gigatons CO₂e by 2030
 - To limit global temperature rise to 1.5°C, emissions must drop rapidly to 25 Gt by 2030 (41 Gt by 2030 for 2°C)
 - An annual 7.6% emissions reduction between 2020 and 2030 needed for 1.5°C goal.
- **Every day we delay, the steeper and more difficult the cuts become**
 - Delaying policies to 2025, annually 15.5% cut would be needed, making the 1.5°C target almost impossible



Asia-Pacific Progress in Climate Action

- This region is the source of about half of the global emission
- The progress of climate action in the Asia-Pacific is not looking bright
- Some countries are working hard but only to achieve the unconditional target
 - This is not enough to reach the 1.5 deg C goal
- Stronger commitments and policies are needed to align climate action to 1.5⁰C goal in this region

Importance of achieving SDG7 in ESCAP member States



**COVID-19
RESPONSE**

Energy services are key to improving productivity, preventing disease and fighting pandemic

- Access to modern energy services (electricity and clean cooking) for improved health and increased productivity
- Powering healthcare facilities
- Supplying clean water for essential hygiene
- Enabling communication and IT
- Off-grid renewables refrigeration use for vaccine storage

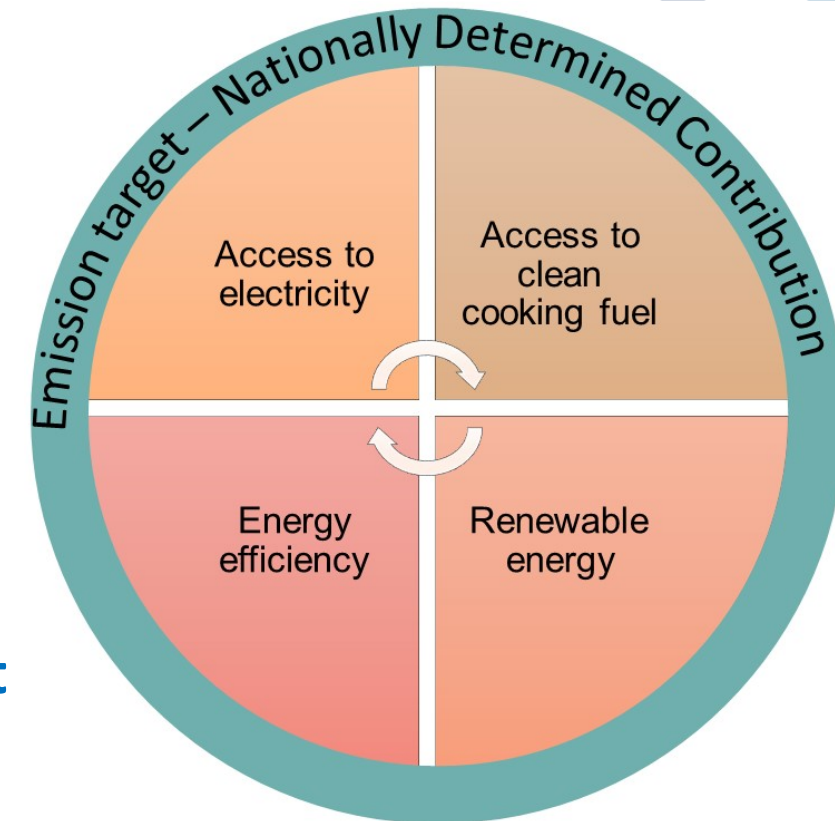


SDG7 and climate action (NDC)

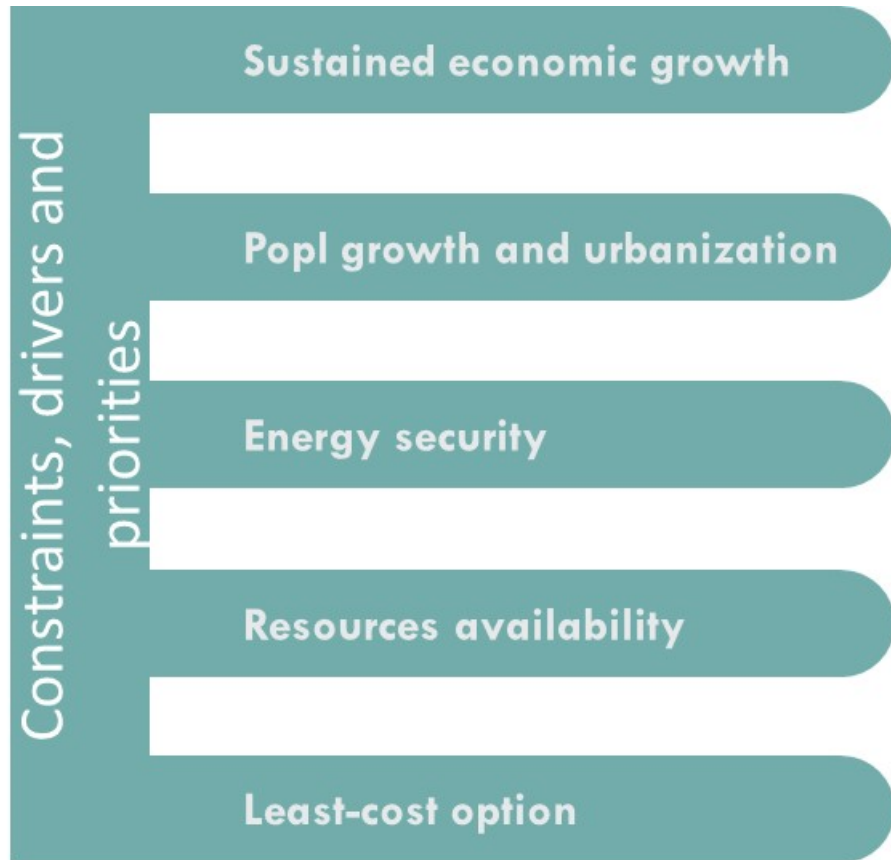
- Energy sector is responsible for two-thirds of emissions
- Achievement of 1.5°C goal would largely depend on the 2030 energy transition, particularly the achievement of SDG7
- Climate commitments (NDCs) cannot be seen as a separate element from SDG7 targets
 - They are mutually inclusive and need to be achieved together
- Countries need to revisit their NDC, raise the ambition to align it with the Paris Agreement goal

Need for an integrated approach to 2030 energy transition

- **SDG7.1**
 - The choice of technology to gain universal access to electricity and clean cooking fuel will impact on SDG7.2, SDG7.3 and NDC
- **SDG7.2**
 - The share of renewable energy in the fuel mix will determine the level of achievement of NDC
- **SDG7.3**
 - The level of energy efficiency achievement will impact on the share of renewable energy (SDG7.2) and NDC
- **NDC**
 - The emission reduction target will guide above all, particularly SDG7.2 and SDG7.3



An integrated approach to 2030 energy transition

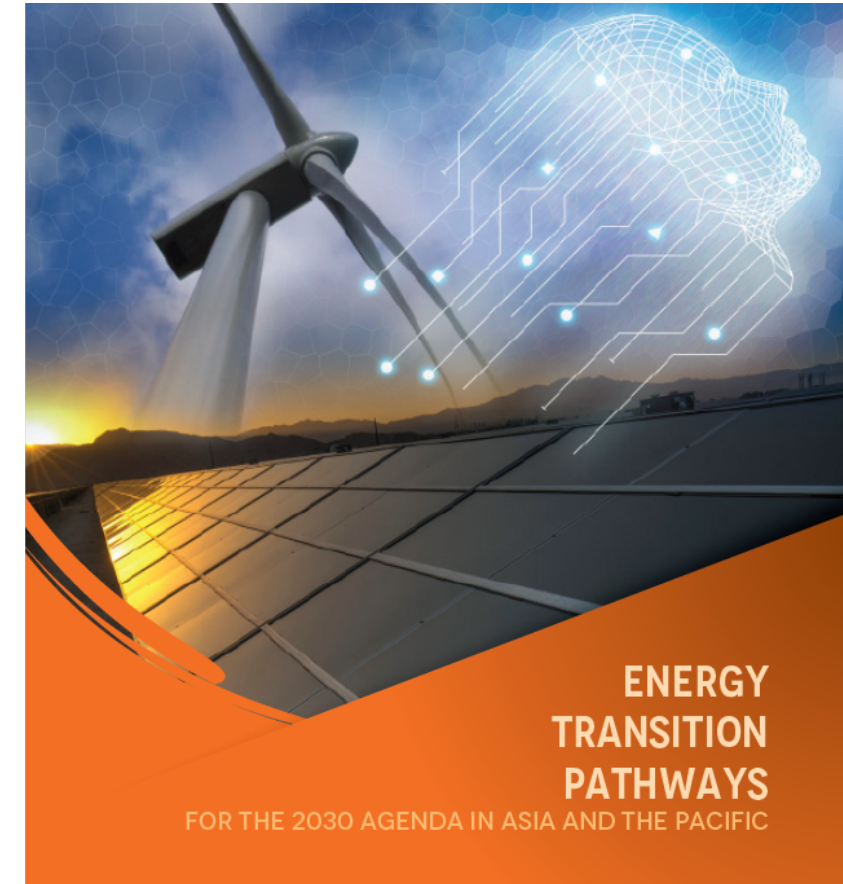


- **The approach should also consider**
 - A sustained economic growth
 - Future changes in demographics
 - Available energy resources in the country
- **Should aim to**
 - Maximize the energy security
 - Identify least-cost options to achieve the targets
- **Present**
 - A collection of technologies and policies needed to achieve SDG7 and NDC targets

National Expert SDG Tool for Energy Planning (NEXSTEP)

- In response to the Ministerial Declaration (of APEF 2018), ESCAP has developed an integrated planning tool NEXSTEP
- It helps to develop national SDG7 roadmap and options to achieve NDCs
- Presents a matrix of technological options and policy measures
- An online tool, allows ESCAP member States **and others** to fully customize

NEXSTEP
National Expert SDG Tool for Energy Planning



Regional Trends Report on Energy for Sustainable Development 2018



NEXSTEP is an online tool

NEXSTEP

National Expert SDG Tool for Energy Planning

- A separate page for each country with login details
- Countries will be able to make changes and choose a scenario that they find most suitable
- Find policy recommendations related to the chosen scenario



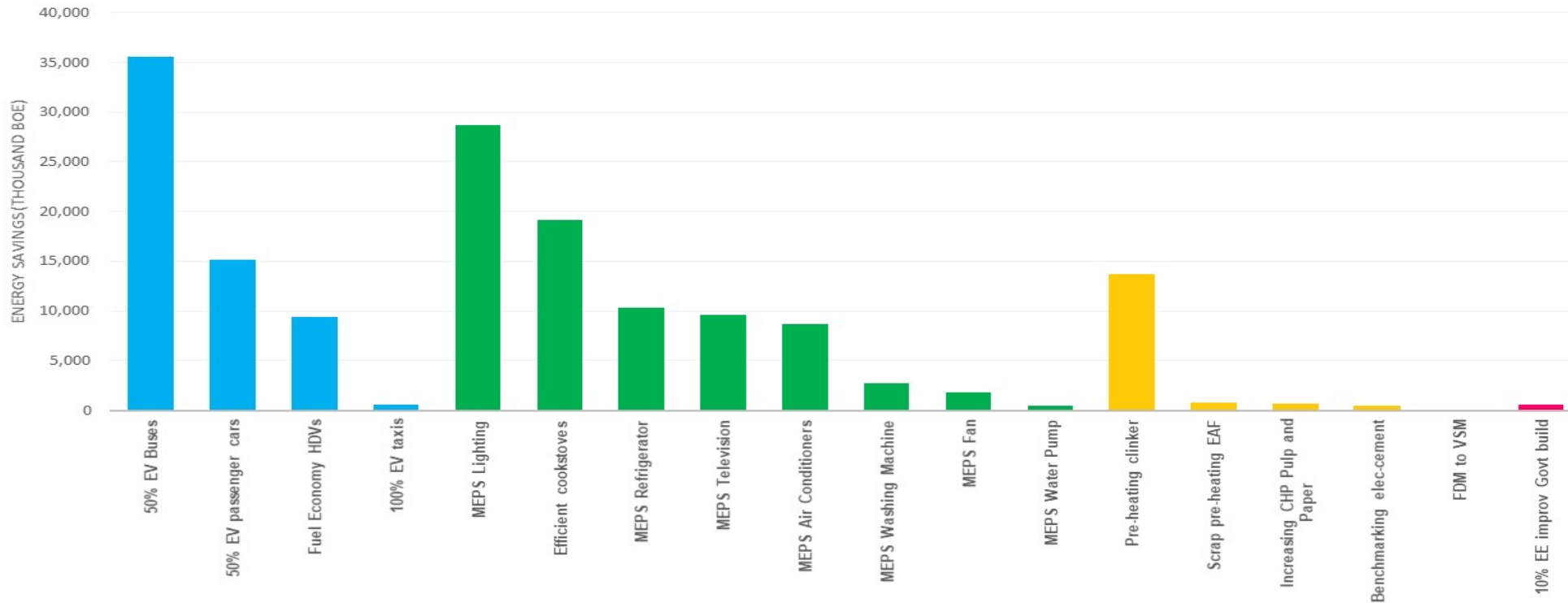
Scenario analysis in NEXSTEP

- **NEXSTEP will support member States to analyse a range of scenarios**
- **At a minimum, all scenarios will aim to achieve**
 - Universal access to electricity
 - Universal access to clean cooking fuel
 - Increasing the share of renewable energy
 - Doubling the rate of energy efficiency
 - Achieving the unconditional target of NDCs
- **Additional scenarios are also produced to look beyond achieving these targets e.g. enhancing NDCs, decarbonizing the power sector, etc.**

Example of NEXSTEP outputs

- Identifying energy and emissions saving opportunities at the technology level
- Estimating cost of technology switch

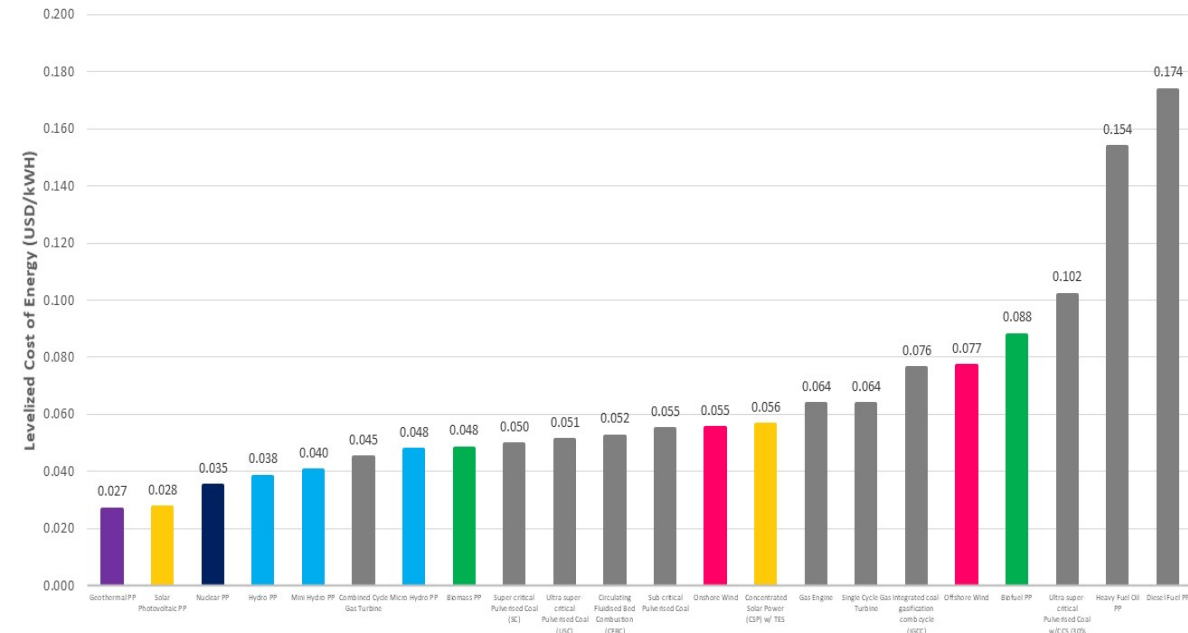
ENERGY EFFICIENCY MEASURES



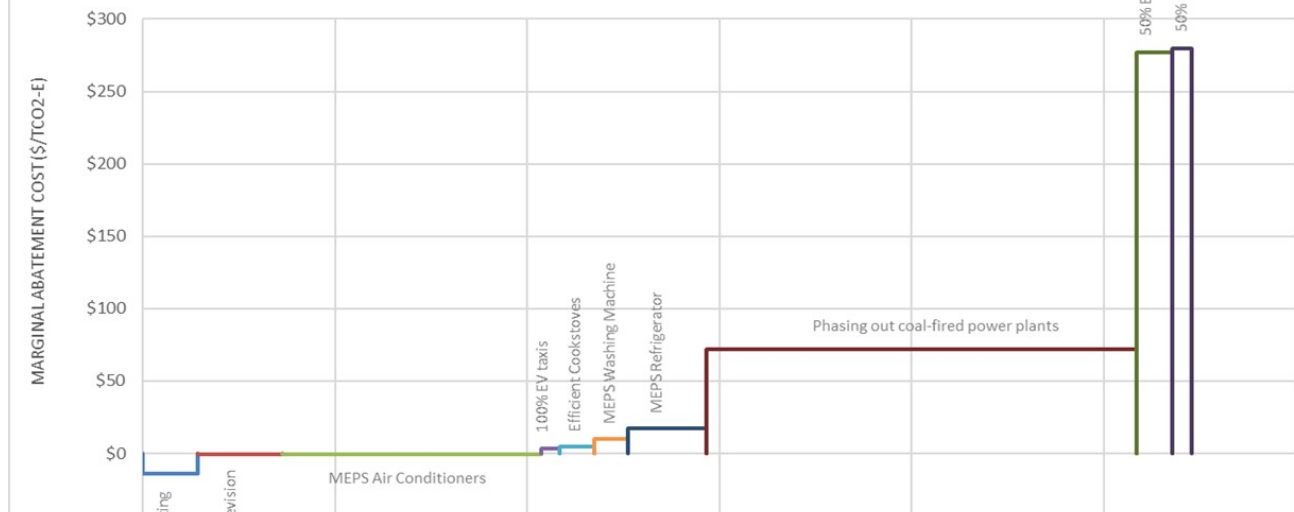
Example of NEXSTEP outputs

- Producing marginal abatement cost curve (MACC)
- Estimating levelized cost of electricity (LCOE) – specific to the country, using national level cost figures

POWER PLANT TECHNOLOGIES, LCOE

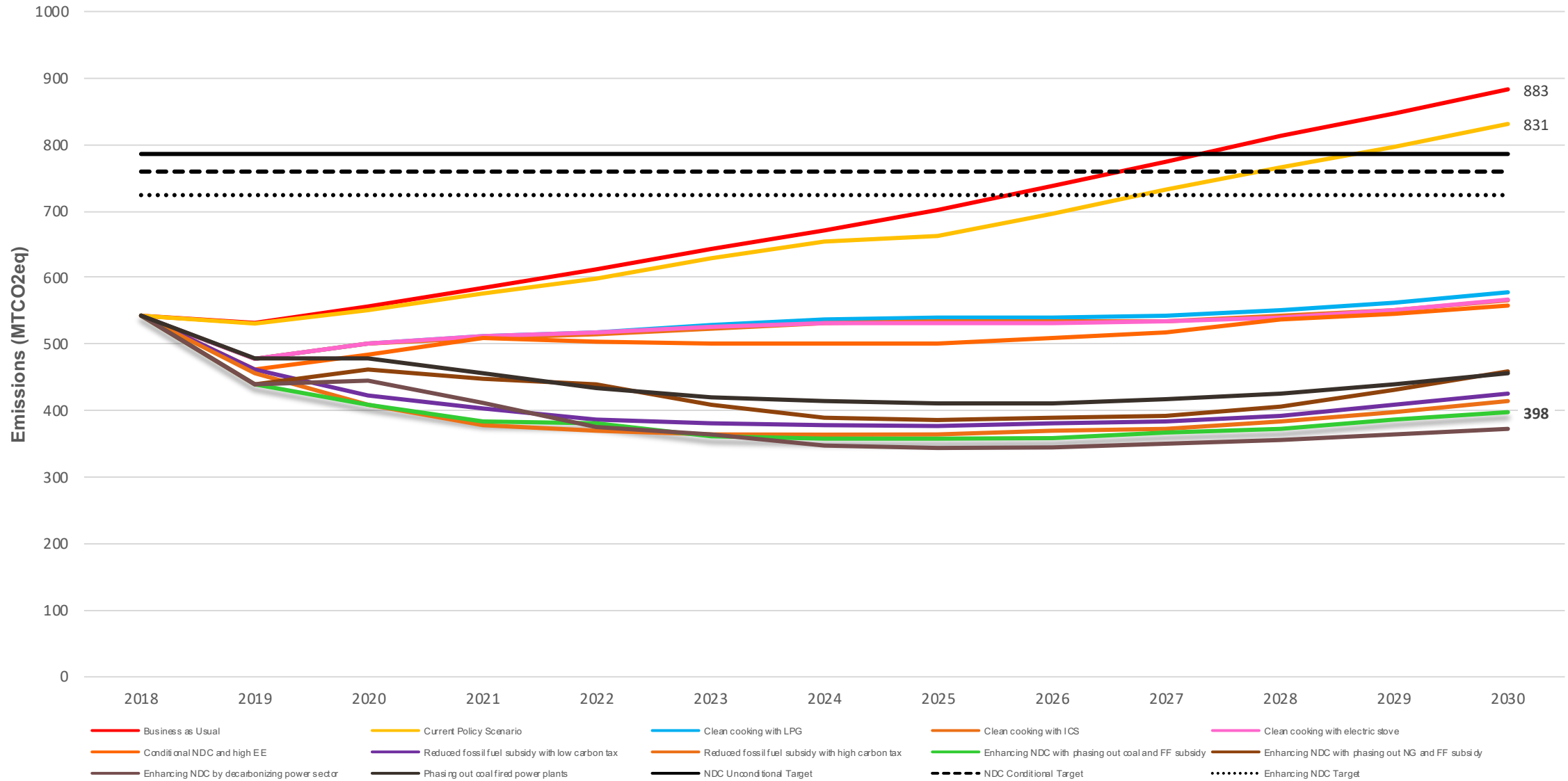


MARGINAL ABATEMENT COST CURVE



Example of NEXSTEP outputs

EMISSIONS BY SCENARIO 2018 -2030



Example of NEXSTEP outputs

- **Suggest policy measures on**
 - **How to achieve SDG7 targets**
 - **Achieving NDC target – focusing on unconditional target but also identifies potential for and opportunities of enhancing NDCs**
 - **Suggests possible approaches and mechanisms to support the investment needed for the energy transition**
 - **Identifies and recommends areas for further and in-depth study**

Country engagement 2020

Works underway

Bangladesh

Fiji

Georgia

Indonesia

Lao PDR

Nepal

Tajikistan

Tonga

In discussion

Kyrgyzstan

Pakistan

Thailand

Viet Nam



Conclusions

- **The development of national SDG7 roadmaps requires an in-depth analysis, to understand the unique country-specific challenges and support policymakers make informed policy decisions**
- **National SDG7 roadmap doesn't aim to replace any existing plan or policy but would complement the existing ones to help achieve the 2030 targets**
- **The development of National SDG7 roadmap will support to implement and scale up NDCs**